CAHPS 9th national USER GROUP MEETING

Report Testing and Evaluation:

Producing Reports That People Understand and Use

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CMS
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Evaluating Public Reporting Efforts

- The continuum of strategies ranges from "high end" academic type research to efforts that are affordable and feasible in the real world.
- What are the issues as you move further down this continuum?
- How can you take advantage of the existing science?

Starting at the Top of the Continuum

- **When we do public reporting, we often have an implicit model of how we think it will work, e.g.,**
  - Consumers will use the information to make choices.
  - Providers will be motivated to improve to protect market share.
- **Testing these implicit assumptions is part of an evaluation**
- **How to interpret negative findings:**
  - Faulty assumptions?
  - A result of poor implementation?

An Example of an Evaluation from the "High End" of the Continuum

- **Started with lab studies– what helps consumers use the information in choice?**
- **Applied findings to the design of a real world report**

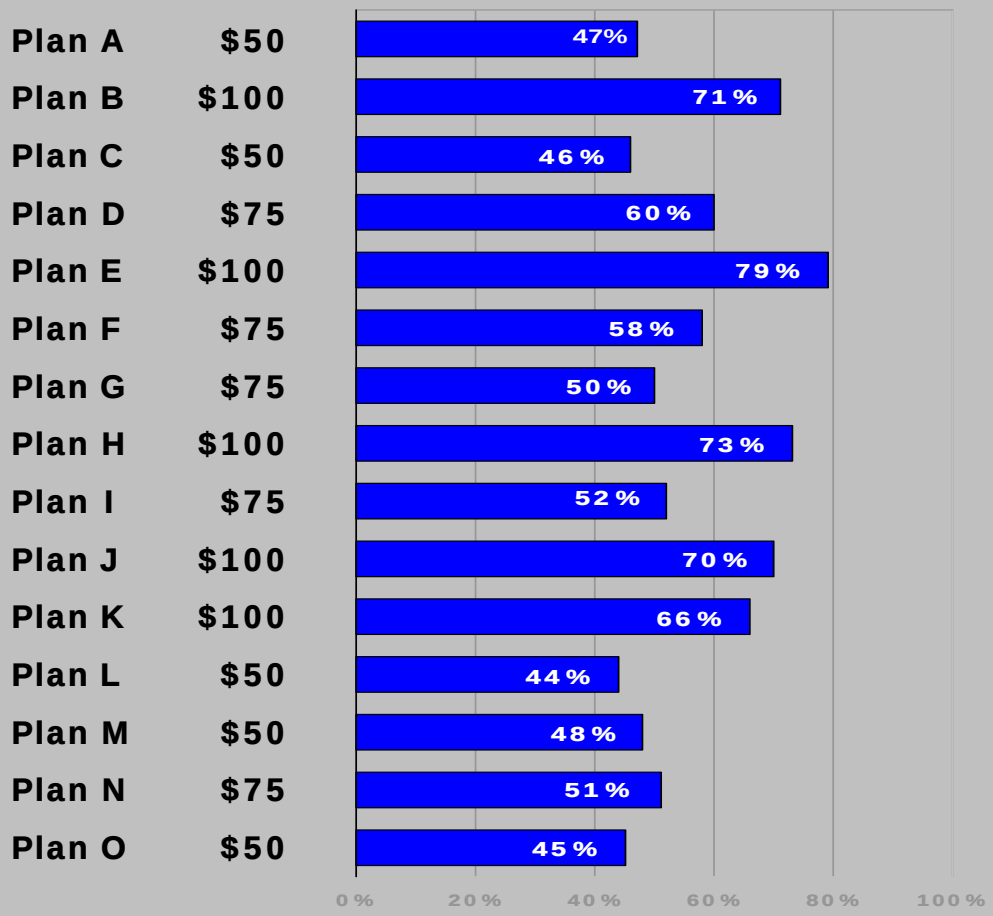
An Example of an Evaluation from the "High End" of the Continuum

- **Evaluation built around the testing of a conceptual model of how reporting works**
- **Evaluation examined the impact of the public report on both consumers and providers**

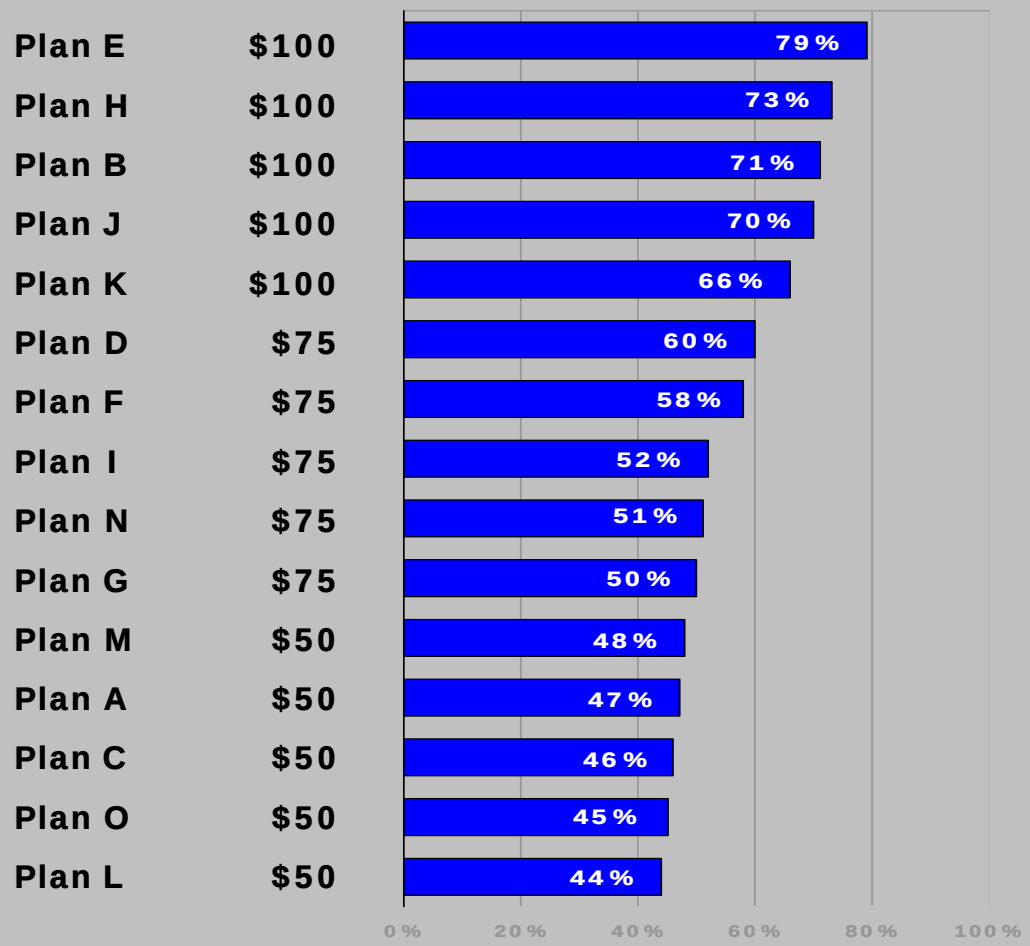
In Lab Studies, Testing the Effect of Making Data More "Evaluable"

- **Evaluable: Information is more likely to be used if:**
  - It is easier to map onto a good / bad scale.
  - Better and worse options are more obvious.
  - People don't have to work hard to figure out what the information means.

Examples from Lab Studies: Consumer Satisfaction Ratings and Premium Cost



Consumer Satisfaction Ratings and Premium Cost



What the symbols mean:

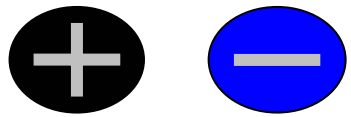
- ⊕ Fewer mistakes, complications and deaths than expected
- ○ Average number of mistakes, complications and deaths
- ⊖ More mistakes, complications and deaths than expected

Regional Hospitals	Surgery	Non-Surgery	Hip/Knee	Cardiac	Maternity
Hospital A	⊕	⊕	⊕	⊕	○
Hospital B	⊕	⊕	⊕	○	○
Hospital C	⊕	⊕	⊕	○	⊖
Hospital D	⊕	⊖	⊕	⊖	*

Community Hospitals	Surgery	Non-Surgery	Hip/Knee	Cardiac	Maternity
Hospital F	⊕	⊕	⊕	○	⊕
Hospital G	⊕	⊕	⊕	⊕	○
Hospital H	⊕	⊕	⊕	○	○
Hospital I	⊕	⊕	⊕	○	○
Hospital J	⊕	⊕	⊕	○	○
Hospital K	⊕	⊕	⊕	○	○
Hospital L	⊕	⊕	⊕	⊕	⊖
Hospital M	⊕	⊕	○	○	*
Hospital N	⊕	⊕	⊕	○	⊖
Hospital O	⊕	⊕	⊕	⊖	○
Hospital P	○	⊕	⊕	○	*
Hospital Q	⊕	○	○	○	*

Different Methods to Improve Evaluability

- Summary measures
- Ordering
- Using symbols with inherent good/bad meaning:



- Highlighting high performers

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Hospital C	⊕	⊕	⊕	○	⊖
Hospital D	⊕	⊖	⊕	⊖	*

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Hospital O	⊕	⊕	⊕	⊖	○
Hospital P	○	⊕	⊕	○	*
Hospital Q	⊕	○	○	○	*

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Hospital C	⊕	⊕	⊕	○	⊖
Hospital D	⊕	⊖	⊕	⊖	*

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Hospital O	⊕	⊕	⊕	⊖	○
Hospital P	○	⊕	⊕	○	*
Hospital Q	⊕	○	○	○	*

Testing the Assumptions About How Public Reports Can Affect Quality Improvement

- **Assumption 1: Consumers can drive improvements through informed choice [market share]**
- **Assumption 2: Concerns about public image can motivate improvements [reputation]**
- **Assumption 3: The feedback about own performance might be sufficient to motivate improvements [feedback]**

Research Questions

- **Does Making Performance Public Increase:**
  - QI efforts within areas reported upon? Are QI efforts greatest among those with lower performance scores?
  - To what degree do “private reports” stimulate QI activities?
  - Actual improvements in care?

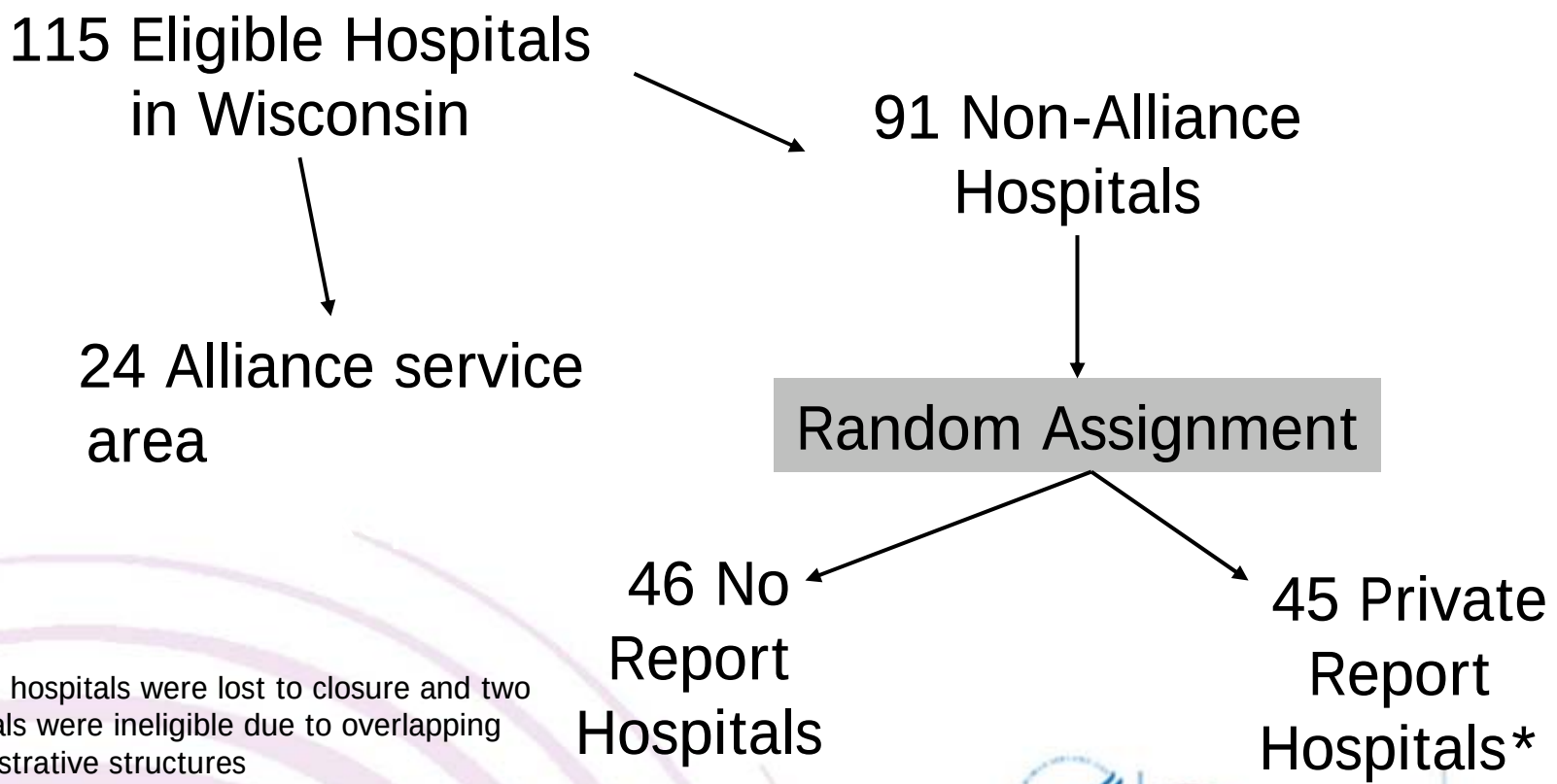
Did the Public Report Affect Hospital Reputations?

In the short term?

In the long term?

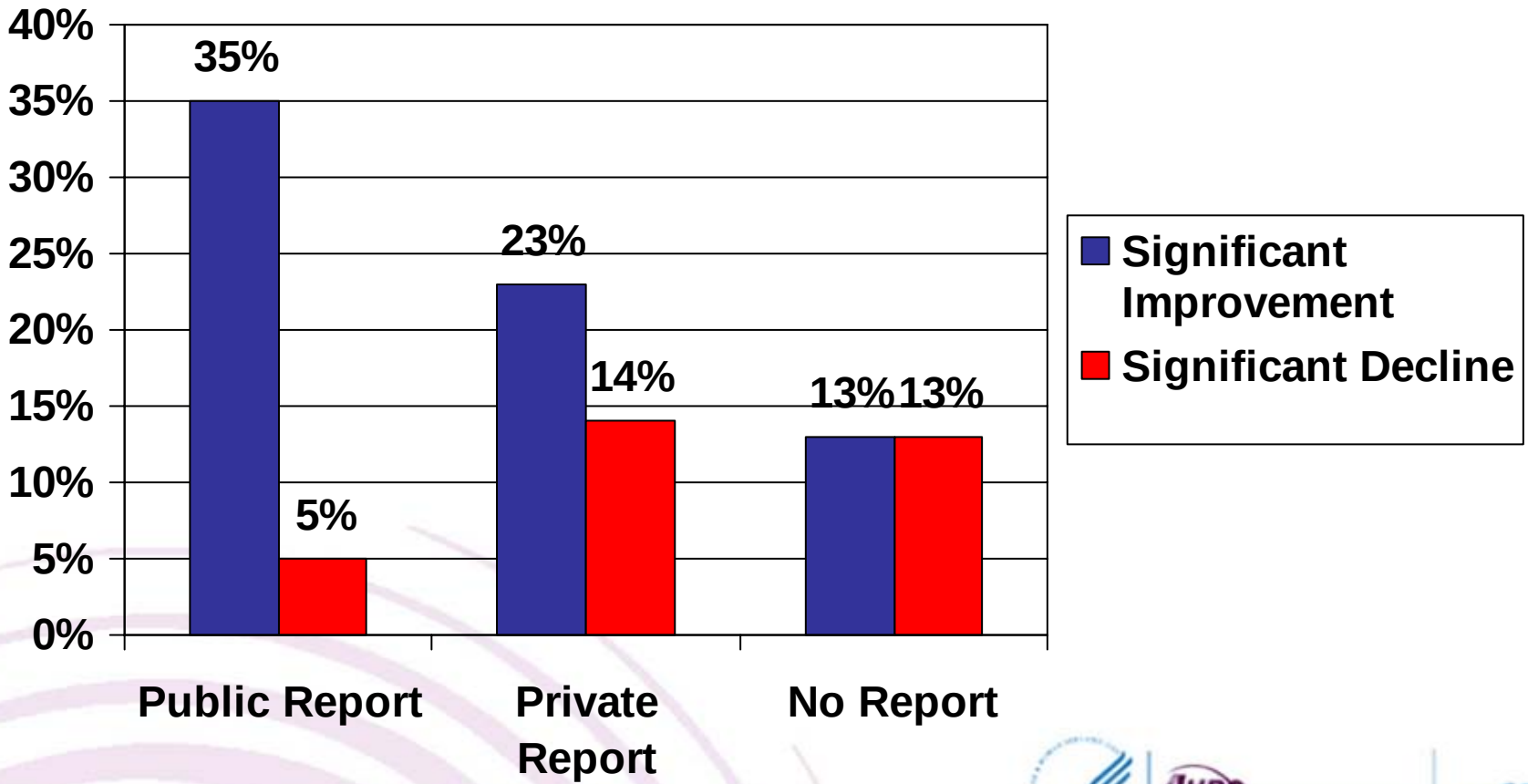
- Did consumers come away with an overall impression that there are better and worse options?
- Are impressions about which hospitals are better remembered?
- Did they discuss the report with others?

Impact of Report on Hospitals: Experimental Design

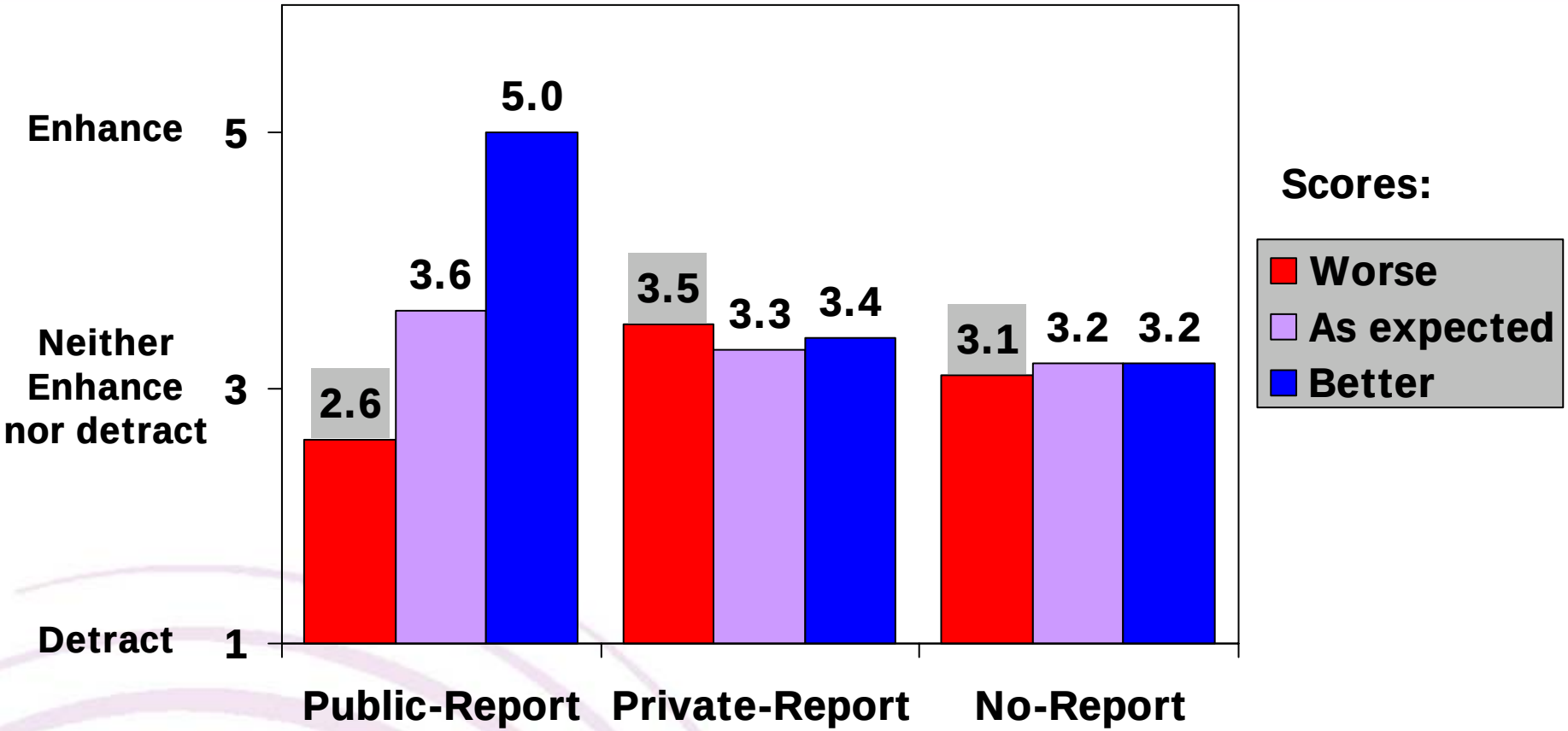


•Three hospitals were lost to closure and two hospitals were ineligible due to overlapping administrative structures

Findings: Percent of Hospitals with Significant Improvements or Declines in Performance in the Post-Report Period

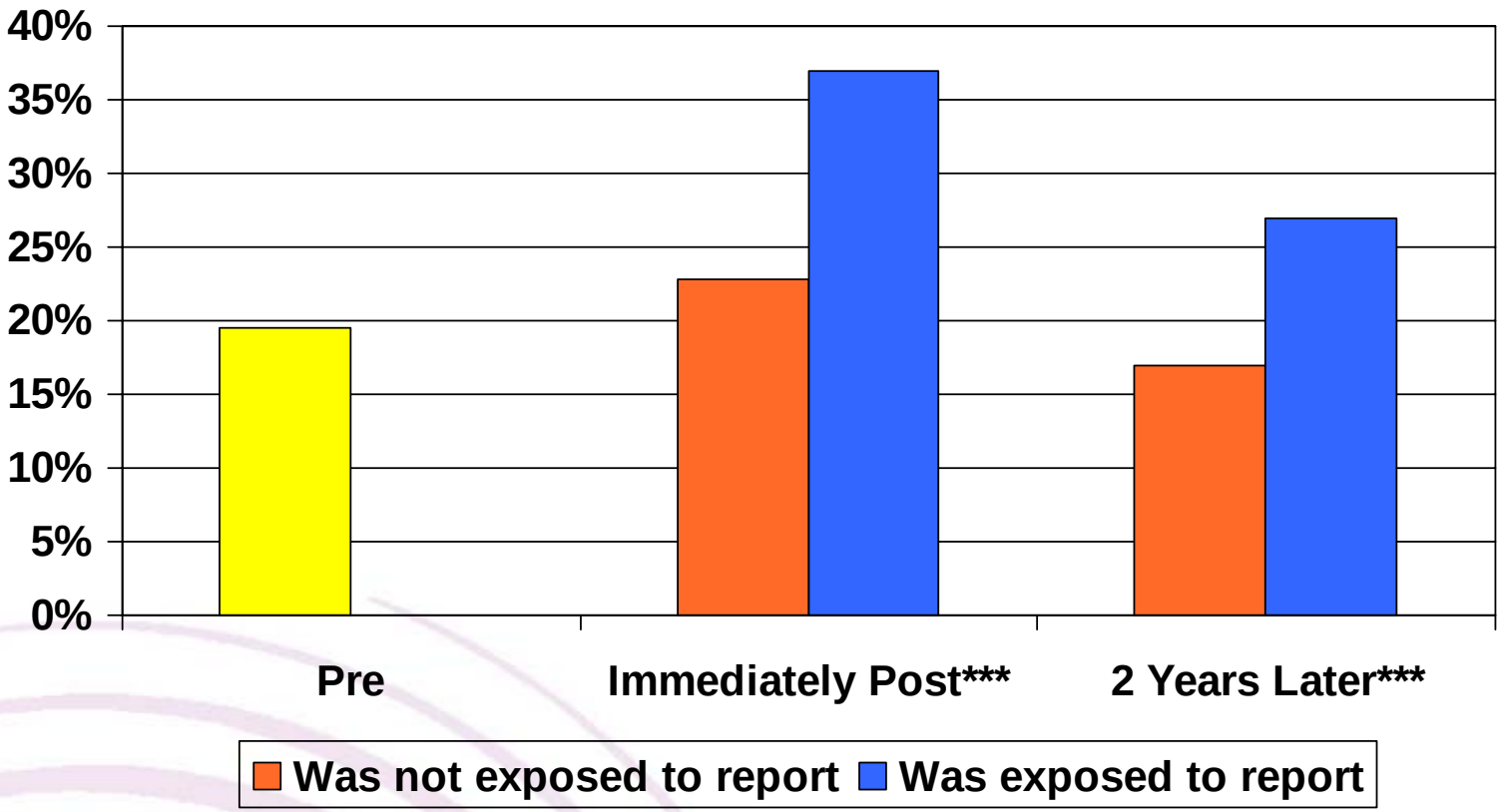


Belief: Likelihood that the Report Would Affect Their Hospital's Public Image (N = 79)



Main effects, $p < .05$, interaction effects, $p < .05$

Consumers Could Correctly Identify Highly Rated Hospitals



*** p < .001

Implication:
Public Reporting Does Work

- **Reporting does stimulate quality improvement -- primarily through a concern for reputation**
- **Feedback and market share were not found to be viable pathways in this study**
- **Public reports are more effective when they are made more evaluable:**
  - Consumers are more likely to use them
  - Providers are more likely to be motivated to improve

CAHPS Is Using a Similar Model

- **Beginning with formative work and lab experiments**
  - What are the barriers to consumer use?
    - Projective test
    - Lab studies
    - Physician-patient communication

- **Based on conceptual model**

CAHPS Is Using a Similar Model

- **Full-scale evaluations in real world settings**
- **Focus on the impact on both providers and consumers**
  - CAHPS users can take advantage of this foundational work and build on it to tailor reporting efforts for own target audiences

Ratings from a survey of patients on how well the doctor scored on:

	Summary Longer bars = better overall score compared to other doctors on this chart	giving help or advice on the phone	being thorough and skillful in examining patients	providing good follow-up care	giving explanations that are easy to understand	spending enough time with patients
Dr. D. Mallin 5220 Lemay Road		better	better	better	better	average
Dr. S. Egan 792 Hadley Street		average	better	better	average	better
Dr. Y. Latimer 166 Cass Avenue		below	better	better	better	better
Dr. B. Layco 1004 Duffy Street		average	average	average	average	better
Dr. E. Melnick 2043 Brinker Road		average	average	average	better	average
Dr. K. Williams 3804 Taylor Street		better	average	below	average	better
Dr. T. Vosti 101 Emerson Avenue		below	better	average	better	average
Dr. L. Durso 2206 Kennerly Street		average	better	average	below	better
Dr. R. Connelly 556 Fullerton Street		average	average	average	average	average
Dr. G. Hutchinson 3314 Krebs Street		below	average	average	average	better
Dr. J. Aplin 225 Sheridan Avenue		below	average	average	average	better

Ratings from a survey of patients on how well the doctor scored on:

	giving help or advice on the phone	being thorough and skillful in examining patients	providing good follow-up care	giving explanations that are easy to understand	spending enough time with patients
Dr. J. Aplin 225 Sheridan Avenue	below	average	average	average	better
Dr. P. Brem 5446 Crandon Avenue	below	average	average	below	better
Dr. R. Connelly 556 Fullerton Street	average	average	average	average	average
Dr. L. Durso 2206 Kennerly Street	average	better	average	below	better
Dr. S. Egan 792 Hadley Street	average	better	better	average	better
Dr. N. Felix 397 Clayton Road	below	below	average	below	below
Dr. A. Greer 4425 Wendelin Road	better	average	below	below	average
Dr. M. Hensley 1202 Hampton Avenue	better	below	average	average	below
Dr. G. Hutchinson 3314 Krebs Street	below	average	average	average	better
Dr. Y. Latimer 166 Cass Avenue	below	better	better	better	better
Dr. B. Layco 1004 Duffy Street	average	average	average	average	better

Ratings from a survey of patients on how w

	Summary Longer bars = better overall score compared to other doctors on this chart	giving help or advice on the phone	being informed and up-to-date on how to treat medical conditions	being thorough and skillful in examining patients	providing good follow-up care	giving patients encouragement and practical advice on staying healthy
Dr. D. Mallin 5220 Lemay Road		92↑	60↑	98↑	96↑	86
Dr. S. Egan 792 Hadley Street		72	65↑	97↑	88↑	92↑
Dr. Y. Latimer 166 Cass Avenue		69↓	45	99↑	91↑	95↑
Dr. B. Layco 1004 Duffy Street		84	59↑	83	82	82
Dr. E. Melnick 2043 Brinker Road		88	28↓	94	82	93↑
Dr. K. Williams 3804 Taylor Street		96↑	33	92	63↓	97↑
Dr. T. Vosti 101 Emerson Avenue		66↓	51↑	98↑	78	88
Dr. L. Durso 2206 Kennerly Street		80	62↑	99↑	72	68↓
Dr. R. Connelly 556 Fullerton Street		79	48	85	67	80
Dr. G. Hutchinson 3314 Krebs Street		61↓	55↑	85	73	62↓
Dr. J. Aplin 225 Sheridan Avenue		67↓	41	82	77	78

Ratings from a survey of patients on how v

	giving help or advice on the phone	being informed and up-to-date on how to treat medical conditions	being thorough and skillful in examining patients	providing good follow-up care	giving patients encouragement and practical advice on staying healthy
Dr. J. Aplin 225 Sheridan Avenue	67↓	41	82	77	78
Dr. P. Brem 5446 Crandon Avenue	68↓	24↓	95	70	69↓
Dr. R. Connelly 556 Fullerton Street	79	48	85	67	80
Dr. L. Durso 2206 Kennerly Street	80	62↑	99↑	72	68↓
Dr. S. Egan 792 Hadley Street	72	65↑	97↑	88↑	92↑
Dr. N. Felix 397 Clayton Road	66↓	25↓	75↓	81	74
Dr. A. Greer 4425 Wendelin Road	95↑	45	86	59↓	92↑
Dr. M. Hensley 1202 Hampton Avenue	90↑	27↓	76↓	77	65↓
Dr. G. Hutchinson 3314 Krebs Street	61↓	55↑	85	73	62↓
Dr. Y. Latimer 166 Cass Avenue	69↓	45	99↑	91↑	95↑
Dr. B. Layco 1004 Duffy Street	84	59↑	83	82	82

Moving Along the Continuum

- **Evaluation is ongoing, and can include a combination of the following:**
  - Formative testing to improve the product
  - Process evaluation to understand the level of effort required and whether the product was implemented as designed
  - Outcome evaluation to examine the effectiveness of the product and long-range impact (when possible)

What Can You Learn From Formatively Testing Your Product?

- Did the target audience comprehend and interpret the materials as anticipated?
- Could the target audience navigate and use the materials?
- Did the target audience react negatively or positively to materials?
- Did different types of audiences have different reactions?
- How best to improve the product

What Can You Learn From Assessing the Implementation Process?

- What did it cost (in terms of time, personnel and resources) to implement the product?
- Was the implementation true to the design, or did the design change in practice?
- How to improve the process in the future

What Can You Learn From Assessing the Outcomes of Your Efforts?

- **Was the audience aware of the product?**
- **What were the audiences' attitudes towards, and beliefs about, the product?**
- **Did the product have the intended effects on the audience's beliefs, attitudes, and behavior?**

What Can You Learn From Assessing the Outcomes of Your Efforts?

- **Did the product have unanticipated effects?**
- **Did other stimulus in the environment affect the outcomes observed?**
- **Was the product useful for audiences?**

What If You Can't Do Everything?

- Always formatively test your product, even if on a very small scale
- Different evaluation techniques can be employed depending on your resources
- …bearing in mind that some information is always better than no information

Relative Cost of Evaluation Options

Types of Evaluation	Low Cost	Medium Cost	High Cost
Formative	Readability test	Intercept surveys	In-depth and Group interviews Observation
Process	Simple recordkeeping	Completing design checklist Surveys	In-depth and Group interviews Observation Document review Surveys
Outcome (and Impact)	Activity assessments Print or media review	Monitoring progress in obtaining objectives Secondary data analysis, if available	Pre-and post-test assessment of audience knowledge, beliefs, behavior Studies of behavior change for target audience

Discussion Questions

- How familiar are participants with larger evaluations of public reporting that have been conducted to date?
- What types of evaluations have participants conducted on their public reporting efforts?
- What lessons have participants learned and can share?
- What are the barriers and facilitators to conducting evaluations of public reporting efforts?

Discussion Questions (cont.)

- **What tools or resources do participants need…**
  - To take advantage of the current evidence base about what works in public reporting?
  - To conduct their own evaluations?